

Abstract

Electric machine (10) which can be operated as a motor or generator, with a rotor (26a, 26b) rotatably mounted in a housing (12), a rotor shaft (24) which extends beyond the housing (12) and a plurality of electromagnet components (28) which are statically disposed in the housing at uniform angular spacings and spaced from the axis of rotation of the rotor, each with a coil core (32) bearing a coil winding (30) consisting of one or more conductors. The pole faces of the end faces of the coil cores (32) are aligned with pole faces of permanent magnets (27) which are retained non-rotatably in or on the rotor and each have a polarity which is successively reversed in the peripheral direction. The coil cores (32) of the electromagnet components (28) are disposed parallel to the axis of rotation of the rotor shaft in the interior of the housing in such a way that their opposing end faces each lie in two planes which are spaced from one another and extend at right angles to the axis of rotation of the rotor shaft. The ends of the electric conductors which form the coil winding (30) of the individual electromagnet components (28) are interconnected via an electric or electronic control device to form at least two pairs of electrical connections.

(Figure 1)

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